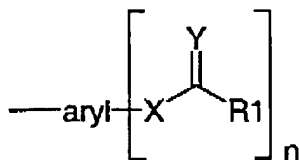


CLAIM Amendments

1. (Canceled).
2. (Currently Amended) The conjugate as claimed in ~~claim 1~~ claim 8, wherein the molecule to be transported is a macromolecule having a molecular weight > 500 Dalton.
3. (Currently Amended) The conjugate as claimed in ~~claim 1~~ claim 8, wherein the molecule to be transported is a polynucleotides, a polypeptide, or a polysaccharide.
4. (Currently Amended) The conjugate as claimed in ~~claim 1~~ claim 8, wherein the molecule to be transported is an oligonucleotide.
5. (Original) The conjugate as claimed in claim 4, wherein the oligonucleotide is modified.
6. (Currently Amended) The conjugate as claimed in ~~claim 1~~ claim 8, wherein the molecule to be transported has a molecular weight < 500 Dalton.
7. (Withdrawn) The conjugate as claimed in claim 6, wherein the molecule to be transported is a mononucleotide.
8. (Currently Amended) A conjugate which comprises a molecule to be transported and at least one aryl radical of the formula I,



(I)

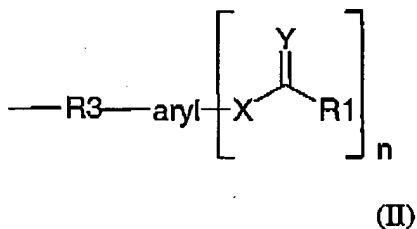
wherein

09/627,787  
After-final Response

page 2 of 11  
October 18, 2004

- aryl is a group which contains at least one ring having an aromatic character;  
X is O or N;  
Y is O, S or NH-R<sup>2</sup>;  
R<sup>1</sup> is a substituted or unsubstituted C<sub>1</sub>-C<sub>23</sub> alkyl radical, which is straight-chain or branched and may contain double and/or triple bonds;  
R<sup>2</sup> is a substituted or unsubstituted C<sub>1</sub>-C<sub>18</sub> alkyl radical which is straight-chain or branched and may contain double and/or triple bonds; and  
n is an integer greater than or equal to 1,

wherein the aryl radical is attached to the molecule to be transported via a chemical group, and wherein the chemical group together with the aryl radical has the formula II

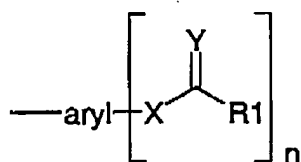


where aryl, X, Y and R<sup>1</sup> are as defined above, and

R<sup>3</sup> is a carbonyl or thioamide group, and

~~wherein the attachment between the aryl radical and the molecule to be transported is stable in vivo.~~

9. (Currently Amended) A conjugate which comprises a molecule to be transported and at least one aryl radical of the formula I,

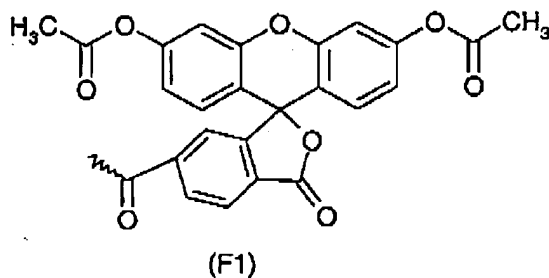


(I)

wherein

- aryl is a group which contains at least one ring having an aromatic character;  
 X is O or N;  
 Y is O, S or NH-R<sup>2</sup>;  
 R<sup>1</sup> is a substituted or unsubstituted C<sub>1</sub>-C<sub>23</sub> alkyl radical, which is straight-chain or branched and may contain double and/or triple bonds;  
 R<sup>2</sup> is a substituted or unsubstituted C<sub>1</sub>-C<sub>18</sub> alkyl radical which is straight-chain or branched and may contain double and/or triple bonds; and  
 n is an integer greater than or equal to 1,

wherein the aryl radical is attached to the molecule to be transported via a chemical group, and wherein the chemical group and the aryl radical together have one of the formulae F1 to F11

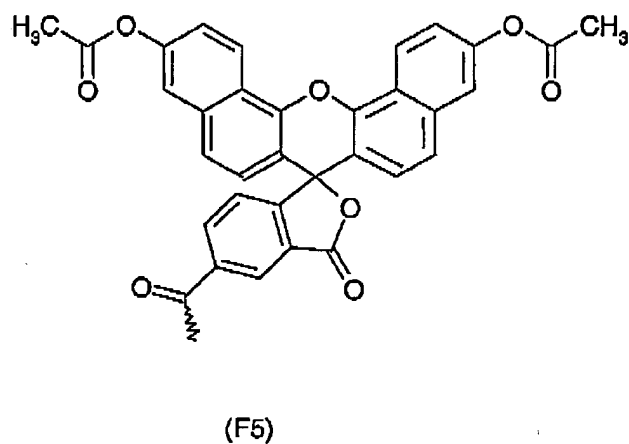
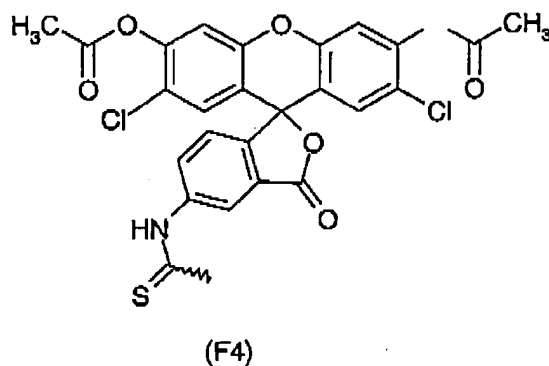
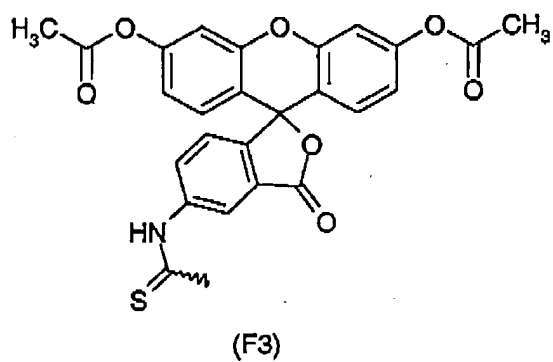
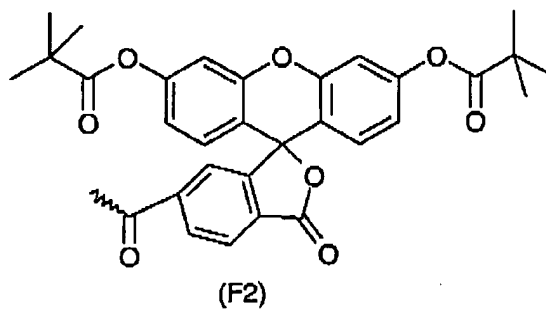


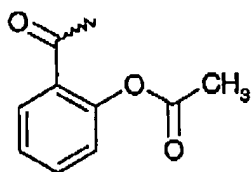
(F1)

09/627,787

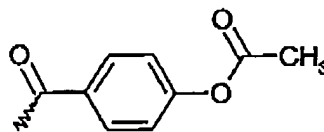
After-final Response

page 4 of 11  
 October 18, 2004

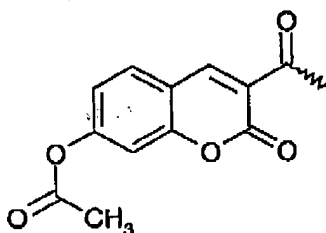




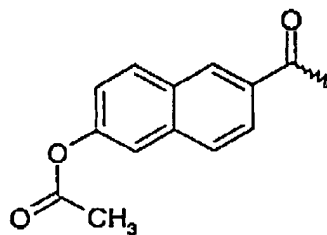
(F6)



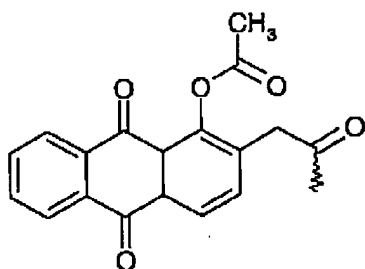
(F7)



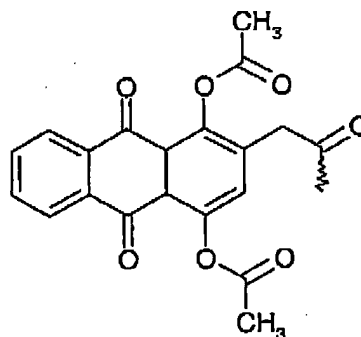
(F8)



(F9)



(F10)



(F11)

10. (Currently Amended) The conjugate as claimed in ~~claim 1, claim 2, claim 8~~ or claim 9 which comprises

- a) a polynucleotide, oligonucleotide or mononucleotide and
- b) one or more aryl radicals of the formula I,

wherein the aryl radical(s) is/are attached to the

5' end and/or  
3' end and/or  
one or more nucleobases and/or  
one or more sugar radicals and/or  
one or more internucleoside bonds,

wherein the aryl radical(s) is/are not attached by a CH<sub>2</sub>-S group if the attachment is via an internucleotide phosphodiester bond.

11. (Currently Amended) A process for preparing the conjugate as claimed in ~~claim 1, claim 8, claim 8~~ or claim 9, wherein

- a) the molecule to be transported which has a reactive group at the position to which the aryl radical is to be attached is prepared; and
- b) an aryl radical is prepared; and
- c) the molecule to be transported is reacted with the aryl radical to give the conjugate.

12. (Previously Presented) The process as claimed in claim 11, wherein the reactive group is an amino group, mercapto group, chloroacetyl group, isocyanate group, isothiocyanate group, carboxylic acid group, N-hydroxysuccinimide group or a carbonyl chloride group.

13. (Original) The process as claimed claim 11, wherein the reaction of the molecule to be transported with the aryl radical is carried out at a pH  $\leq$  7.5.

14. (Original) The process as claimed in claim 11, wherein the reaction of the molecule to be transported with the aryl radical is carried out at a pH of 7.0.

15. (Original) The process as claimed in claim 11, wherein the molecule to be transported is a polynucleotide, oligonucleotide or mononucleotide.

16. (Currently Amended) A method for transporting a molecule across a membrane, which comprises

- a) preparing the conjugate according to ~~claim 1, claim 8, claim 8~~ or claim 9 in which the molecule to be transported is attached to at least one aryl radical of the formula I or II,
- b) incubating the conjugate with the membrane, whereupon
- c) the conjugate is transported across the membrane.

17. (Currently Amended) A method for transporting a molecule into a cell, which comprises

- a) preparing [[a]] the conjugate according to ~~claim 1, claim 8, claim 8~~ or claim 9 in which the molecule to be transported is attached to at least one aryl radical of the formula I or II,
- b) incubating the conjugate with the cell, whereupon
- c) the conjugate is transported into the cell without the aryl radical being cleaved off.

18. (Original) The method as claimed in claim 17, wherein the cell is a eukaryotic or a prokaryotic cell.

19. (Original) The method as claimed in claim 17, wherein the cell is a bacterial cell, yeast cell or a mammalian cell.

20. (Original) The method as claimed in claim 17, wherein the cell is a human cell.

21. (Previously Presented) The process as claimed in claim 17, wherein the cell is a tumor cell.

22. (Currently Amended) A process for preparing a pharmaceutical composition comprising the conjugate as claimed in ~~claim 1, claim 8, claim 8~~ or claim 9, which process comprises

09/627,787  
After-final Response

page 8 of 11  
October 18, 2004

- a) preparing a pharmaceutically active compound or a derivative thereof, where said pharmaceutically active compound or said derivative contains at least one reactive group at a position to which an aryl radical is to be attached,
- b) preparing an aryl radical of the formula I or II,
- c) reacting the pharmaceutically active compound or its derivative with said aryl radical to give the conjugate ~~and admixing the conjugate~~.

23. (Currently Amended) The process of claim 22, further comprising ~~the addition of~~ admixing the conjugate with an additive ~~and/or~~ and/or an excipient.

24. (Currently Amended) A pharmaceutical composition, comprising the conjugate as claimed in ~~claim 1, claim 8,~~ claim 8 or claim 9.

25. (Currently Amended) A diagnostic aid, comprising the conjugate as claimed in ~~claim 1, claim 8,~~ claim 8 or claim 9.

26. (Currently Amended) A test kit, comprising the conjugate as claimed in ~~claim 1,~~ ~~claim 8,~~ claim 8 or claim 9.